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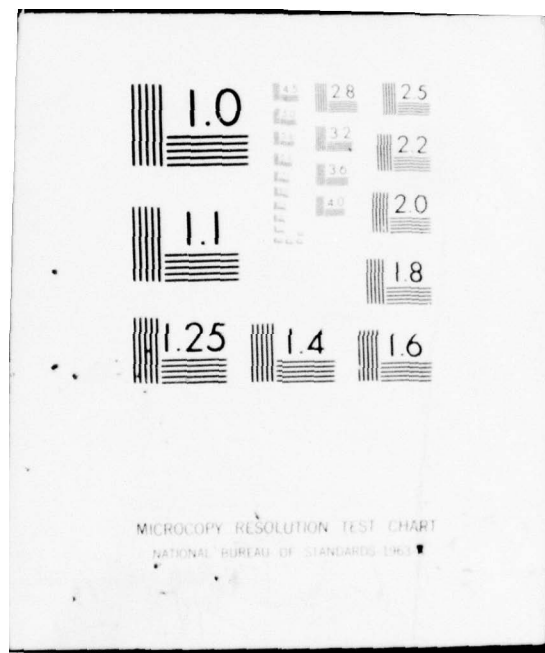
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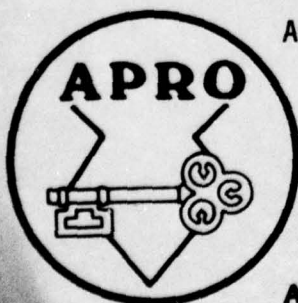
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CHANGE ORDER ADMINISTRATION

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by

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and
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ABSTRACT

This report assesses change order administration in the Army Materiel Command (AMC). It specifically addresses the timeliness of change order definitization and the adequacy of procurement change order policy. Finally, it deals with the constructive change order and its impact on Army contracting.

Although the report concludes that change order administration in AMC is relatively effective, recommendations are offered which should further reduce the incidence of change order problems and preclude potential problems with constructive changes.

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EXECUTIVE SUMMARY

A. Background. It has been alleged that the military services have been negligent in the management of change orders. They have been accused of careless practices in issuing and definitizing change orders resulting in an increase in contractor claims.

B. Problem. The unilateral change order is unique to Government contracting. It has no counterpart in the commercial marketplace. Contractors have called it the most important operating problem in Government procurement. The fact that approximately one-third of the appeals decided by the Armed Services Board of Contract Appeals (ASBCA) arise under the Changes clause lends support to this contention.

C. Objectives. The objectives of this report are to determine if change order administration is effective within the Army Materiel Command (AMC) and if there are existing or impending change order problems which require attention.

D. Scope and Methods. The study was divided into two phases. Initially, active appeals before the ASBCA and recent decisions of the ASBCA and Court of Claims were analyzed. The purpose of this investigation was to determine if change order definitization was the primary issue in dispute. The second phase consisted of an examination of change order policy and procedure at all levels within the Department of Defense (DOD) and the Army. Additionally, Major Subordinate Command (MSC) contract files were reviewed and interviews were conducted with operating procurement personnel. The purpose of this effort was to evaluate the effectiveness of current change order policy and administration throughout AMC.

E. Conclusions and Recommendations. Change orders in AMC are well administered. Status reports reflect that MSC's have positive programs to insure timely definitization. Milestone reporting is required on those change orders which are valued at \$10,000 or more. Very few change orders are over six months old. The equitable adjustment has not been cited as the basis for dispute on any recent ASBCA or Court of Claims decision on an AMC contract. Although the constructive change order (CCO) is not a major problem at the moment, it is a potential threat to Army procurement. It is currently the primary basis for disputes under the Changes clause in ASBCA appeals, with the Navy and the Air Force incurring the bulk of the dollar value in dispute. The CCO becomes more pervasive each year.

The report recommends that AMC continue to press for forward pricing or bilateral ceiling prices on contract modifications. It also expresses the view that some relaxation of change order reporting may now be appropriate. An overemphasis on timely definitization can be detrimental. The MSC's should expand the use of contract language which will alert contractors to report potential CCO's. Contracts should also include specific provisions setting forth the names of Government personnel who are authorized to issue change orders. Finally, an educational program should be instituted which explains CCO's to Government procurement personnel. Other recommendations pertaining to general improvements in change order management are discussed in Chapter VI.

CHAPTER I

INTRODUCTION

A. Background

A contract change, in a generic sense, is a term which can describe a quantity change, an economic price adjustment, an engineering change or a variety of other modifications to Government contracts. In this report change will be synonymous with change order as defined by the Armed Services Procurement Regulation (ASPR). A change order is "a written order signed by the contracting officer, directing the contractor to make changes which the Changes clause of the contract authorizes the contracting officer to order without the consent of the contractor." In short, the Changes clause (Appendix A) authorizes the contracting officer to issue unilateral change orders within the scope of the contract.¹ The clause further states that any increase or decrease in costs due to the change shall be taken care of with a bilateral contract modification.

The change order provides Government contracting officers with the flexibility to shift emphasis or to make engineering modifications to meet existing needs of requiring activities. But this very flexibility is fraught with potential problems. The first that comes to mind is increased cost. Simply, changes in contract technical requirements usually mean that additional dollars must be added to the contract. Additionally, change orders

¹Although there are several Changes clause in ASPR, the clause used in fixed-price supply contracts is sufficient for purposes of this report.

can complicate equipment or delay deliveries. Further, they can increase the possibility of contractual disputes. In FY 1974 302 of the 1062 appeals decided by the Armed Services Board of Contract Appeals (ASBCA) cited the Changes clause as the principal contract clause involved in the disputes.²

The allegation has been made that the military services have been lax in change order issuance and administration. It has been charged that careless definitization of change orders processed under the Changes clause has resulted in an inordinate number of claims related to the equitable adjustment of the changes.

B. Objectives

The objectives of this report are to:

1. Identify recent Army contract disputes to determine whether equitable adjustments related to the definitization of change orders are responsible for the claims.
2. Analyze current Department of Defense (DOD), Army, and Army Materiel Command (AMC) policy on the management of change orders.
3. Investigate the administration of change orders at selected Major Subordinate Commands (MSC's) in AMC for adherence to policy and effectiveness of contract procedures.
4. Determine if the constructive change order is a current Army problem.
5. Recommend improvements as required.

²Armed Services Board of Contract Appeals (ASBCA). Report of Transactions and Proceedings of the ASBCA for the Fiscal Year Ending 30 June 1974. 1974.

C. Scope and Methodology

The study included a review of active appeals before the ASBCA which specified the Changes clause as the basis of the appeal. Recent decisions of the ASBCA and the Court of Claims were also analyzed.

A sample of contract files from selected commodity commands were examined.

Interviews were conducted with contracting officers, procurement analysts, configuration management specialists, and other personnel who make decisions or are affected by change order actions.

D. Definitions

A contract may be changed in a number of ways during the course of contract performance. As a result, terms can become confused. Therefore, this section defines terms that are basic to an understanding of this report. All definitions, except those footnoted, are from Section I, Part 2, ASPR.

1. Change Order. A written order signed by the contracting officer, directing the contractor to make changes which the Changes clause of the contract authorizes the contracting officer to order without the consent of the contractor. (Defined in para. A but repeated for emphasis).

2. Contract Modification. Any written alteration in the specification, delivery point, rate of delivery, contract period, price, quantity, or other contract provisions of an existing contract, whether accomplished by unilateral action in accordance with a contract provision, or by mutual action of the parties to the contract. It includes (i) bilateral actions

such as supplemental agreements, and (ii) unilateral actions such as change orders, orders for provisioned items, administrative changes, notices of termination, and notices of the exercise of a contract option.

3. Contracting Officer. Any person who, either by virtue of his position or by appointment in accordance with procedure prescribed by this Regulation, is currently a contracting officer with the authority to enter into and administer contracts and make determinations and findings with respect thereto, or with any part of such authority. The term also includes the authorized representative of the contracting officer acting within the limits of his authority.

4. Supplemental Agreement. Any contract modification which is accomplished by the mutual action of the parties.

5. Constructive Change Order (CCO). A CCO is conduct (written or oral communications, actions or inactions) by Government representatives that could constitute a change in the terms and conditions of a contract. A CCO results from facts, conduct, circumstances, or instruments - in other words, written or oral acts or omissions - by the contracting officer (or other authorized Government official) which are of such a nature that they are construed or inferred to have the very same effect as if the contracting officer had issued a formal, written change order stated to be under the Changes clause.³

³F. Trowbridge vom Baur, "Constructive Change Orders"/Edition II, Briefing Papers, The Government Contractor, No. 735. 1973.

6. Engineering Change. An alteration in the configuration of a configuration or item, delivered, to be delivered, or under development, after formal establishment of its configuration identification.⁴

7. Engineering Change Proposal (ECP). A term which includes both a proposed engineering change and the documentation by which the change is described and suggested.⁵

8. Equitable Adjustment. The administrative means of arriving at a price adjustment or schedule adjustment, once a contract has been modified by a change order.⁶

9. Unfinalized Change Order. Any change order for which a final equitable adjustment in price or schedule remains to be negotiated.⁷

10. Authorized Representative. (i) An individual with specific contracting authority delegated in writing by the contracting officer.⁷ (ii) Also, the courts and boards have occasionally construed authorized representative to mean a Government representative who, by virtue of his position and his words and actions, could reasonably be deemed by the contractor to have official authority to issue change orders, even though not specifically delegated by the contracting officer. Resident engineers and inspectors are examples of such Government representatives.⁸ Also, see Chapter V.

⁴MIL-STD-480. Military Standard, Configuration Control-Engineering Changes, Deviations and Waivers. 1968, Appendix E.

⁵Ibid.

⁶A Course in Changes and Modifications. Procurement Associates, Inc., 1973, Chapter XII.

⁷Implied, but not specifically defined, in ASPR.

⁸Lillard's, ASBCA 6630, 61-1 BCA para 3053

CHAPTER II

CHANGE ORDER CLAIMS

A. Introduction

A formal change to a contract can be effected in two ways. The preferred method is the negotiation of a supplemental agreement by the contracting officer and the contractor. In this way agreement is reached regarding the extent of the change, the price of the change, and any required adjustment to the delivery schedule. But there are occasions when quick implementation of the change is necessary in order to eliminate a bottleneck or solve an engineering problem. Time may not permit the negotiation of a bilateral agreement. In such situations the Changes clause gives the contracting officer the right to make a change by means of a written change order. Provided the action is within the "scope of the contract", the contractor must comply with the unilateral direction by the contracting officer. Although the change order should include a ceiling price for implementing the change and a statement regarding schedule impact, the clause provides for an equitable adjustment to be made at some later point in time. Such adjustments are reflected in supplemental agreements. This procedure is usually referred to as definitizing the change order. If agreement cannot be reached, the contractor may appeal through the Disputes clause to the ASBCA.

B. Outstanding ASBCA Appeals

The first phase of the study was to determine how many contractor appeals were disagreements regarding equitable adjustments of the change orders.

Initially, the Adversary Proceedings Division, Office of the General Counsel, HQ AMC, identified the active appeals which cited the Changes clause as the central issue. Approximately 50 appeals were represented. One-third of these, including those of greatest dollar value, were selected for intensive analysis. Equitable adjustment was not an issue in any of the appeals which was reviewed. Interviews were also conducted with attorneys in the Adversary Proceedings Division. They were not aware of a particular problem with the definitization of change orders. In fact, they pointed out that the total dollar value of outstanding appeals was a reduction over previous years. The total value of outstanding appeals on 31 March 1975 was approximately 33 million dollars¹ compared with 74 million dollars on 31 January 1974.²

C. Final Decisions in ASBCA 74-1.

A deeper investigation into the hypothesis that change order claims were being settled by the courts and boards required that recent final decisions of the ASBCA also be analyzed. Final decisions of ASBCA for the first half of FY 74 served as the basis for this review. The decisions are digested in the Commerce Clearing House, Inc. Publication "Government Contracts Reporter", the volume entitled Boards of Contract Appeals Developments.

¹Headquarters United States Army Materiel Command, AMCGC-A, Impact of Current Developments on the Legal Mission of AMCGC, 31 March 1975.

²HQ AMC, Improved Management of Procurement and Contracting Techniques, 2nd Qtr FY 74.

Approximately 62 decisions were identified with disputes under the Changes clause. Only 27 of the 100 were Army cases, 14 dealing with non-AMC construction contracts. The equitable adjustment was not the point of contention in any of the 13 remaining Army cases.

It was pointed out in Chapter 1 that 302 appeals of the 1602 appeals decided by ASBCA in FY 74 cited the Changes clause as the principal contract clause involved in the dispute. The question might be asked whether all the changes cases in 74-1 have been identified since it might be expected that 150 cases as opposed to the actual 62 should have been decided in the first half of the fiscal year. It is possible that some may have been missed. The reason for the possible discrepancy can be traced to the descriptors which are used as decision headings. In some areas, the descriptors clearly identify the principal clause involved in the dispute, e.g., Default Termination. On the other hand, many claims redressable under the Changes clause do not reflect this in the heading, e.g., Specifications-Interpretation of Specifications. However, it should be emphasized that any claim related to the equitable adjustment of a formal change order will undoubtedly include "changes" in the descriptor. This was confirmed by a review of equitable adjustments to changes cases in other departments and agencies. Again, no Army cases in this category appeared in 74-1. In summary then, it is probable that there is not a one for one correlation between the cases shown as Changes cases in the ASBCA annual report and the Changes cases reviewed in this report. However, Army cases pertaining to equitable adjustments should have surfaced.

CHAPTER III

CHANGE ORDER POLICY AND PROCEDURES

A. General.

The effectiveness of current change order administration could not be evaluated solely on the basis of a review of contract disputes. Only a small percentage of change order problems would be expected to reach the dispute stage. Rather, most difficulties related to implementing and defining change orders would be resolved at the command or operating level. Therefore, it was necessary to examine change order policy, procedures and reporting systems at all levels within DOD, the Army and AMC. Additionally, contracting officers and negotiators who work with contract modifications on a daily basis were interviewed and contract files were reviewed. The results of this investigation are discussed in this chapter.

B. ASPR.

1. General. In general, change order policy in the ASPR is found in Section XXVI, Contract Modifications. Highlights of the policy are as follows:

a. Supplemental agreements are preferred over change orders for contract modifications.

b. Change orders shall be issued by the Procuring Contracting Officer (PCO) except when delegated to the Administrative Contracting Officer (ACO).

c. A change order shall include a negotiated maximum price unless this would be impractical.

d. Change orders shall be prepared on Standard Form 30, Amendment of Solicitation/Modification of Contract. Sections XVI and XXVI outline specific instructions for completing the form.

e. The PCO is responsible for negotiating equitable adjustments resulting from change orders unless this authority has been delegated to the ACO.

2. Section XXVI, Part 2. Part 2 of Section XXVI sets forth the policy and procedures governing the issuance, processing and adjusting of change orders. Most of the Part 2 provisions appeared in the ASPR for the first time in the 1 July 1974 edition. New paragraphs deal with government-directed, contractor-prepared engineering change proposals (ECP's), change order accounting procedures (Appendix C), and provisions for a release of claims clause. In addition 26-206 contains a more detailed treatment of preparation, issuance, correction and pricing of change orders. The paragraph discusses the two types of documents required when change orders are issued, the change order and the supplemental agreement. It points out that the PCO shall issue change orders except when specifically delegated to the ACO. Standard Form 30 is prepared for either the change order or the supplemental agreement. When the form is used as a change order, the contracting officer should complete all applicable items on the form except for the estimated change in contract price. Paragraph 26-206 also calls upon contracting organizations to negotiate equitable adjustments resulting

from change orders in the shortest practicable time. A suspense system is required which identifies outstanding unpriced change orders. Normally, the PCO shall be responsible for negotiating all equitable adjustments resulting from change orders, including the execution of supplemental agreement on Standard Form 30. The ACO shall forward to the PCO the contractor's proposal, together with an ACO analysis. Unless specifically requested by the PCO, the analysis shall not include the negotiation of any element of the contractor's proposal.

3. Section XXVI, Part 8. Part 8 of Section 26 is entitled "Notification of Changes." This part recognizes the major problem caused by the constructive change order. It describes contractual techniques which are designed to reduce the cost and schedule impact of constructive changes.

4. Section III, Part 8. Paragraph 3-807.3 sets forth the requirements for cost or pricing data on contract modifications. The contracting officer shall require the contractor to submit cost or pricing data when the modification involves aggregate increases and/or decreases in costs plus profits which are expected to exceed \$100,000.

Paragraph 3-801.5 discusses the requirement for field pricing support on contract modifications. Field pricing support means the analysis of a contractor's price proposal by field technical and professional specialists. Included are plant representatives, ACO's, contract auditors,

price analysts, quality assurance representatives, engineers, lawyers, and small business specialists.

The ASPR requires field pricing support prior to negotiation of any contractor modification proposal in excess of \$100,000 when the price is based on cost or pricing data submitted by the contractor. The contracting officer shall request a field pricing report, including a contract audit review, unless the contracting officer has adequate information available to determine the reasonableness of the proposed cost or price.

C. Army

Change order coverage in the Army Procurement Procedure (APP) is in 3-408.52 and 3-408.53, Change Orders Awarded, Definitized and Outstanding. Actually, the coverage is not so much policy as a requirement for tracking and reporting change order status. The procedure requires Heads of Procuring Activities to report quarterly by number and dollar amount all changes over \$100,000 which have been awarded or definitized during the period. It also requires activities to report the age of change orders which were not definitized at the end of the period. The age of a change order is computed from date of issuance. Change orders are broken out into categories of under 6 months, 6 months to 12 months, and over 12 months. Outstanding undefinitized change orders of 1 million dollars or more require a narrative explanation in the report. The narrative includes reasons for delays in definitizing and actions taken to settle.

D. AMC

The Army Materiel Command Procurement Instruction (AMCPI) expands on the APP change order report in AMCPI 3-408.52. In addition to the quarterly

reports required by the APP, the AMCPI requires procurement activities to furnish detailed monthly reports of overage change orders. An overage change order is an undefinitized change order which has an age of six months or older. Each overage change order is reported by contractor, contract number, change order number and date, reasons for delay, corrective action being taken, and realistic forecast for definitization.

The AMCPI further requires procurement activities to develop internal procedures for the management and control of change orders from date of issuance to definitization, including the surfacing of undefinitized change orders over 90 days old and intensive management of those orders over 120 days old.

Section XXVI of the AMCPI adds teeth to the ASPR policy for forward pricing (supplemental agreement) of a change order or the inclusion of a price ceiling. Exception to the policy shall be made only by the major subordinate commander or a project manager reporting directly to HQ AMC. Any exception, with justification, must be forwarded to HQ AMC. In addition, a copy of an unpriced or without ceiling change order must be furnished with the quarterly report.

Finally, Section XXVI covers inflated ceiling prices submitted by contractors. The instruction recognizes that urgency may dictate the acceptance of an inflated contractor ceiling price. In such circumstances the contractor's ceiling price should be included in the modification along with a lessor estimated ceiling price determined by the contracting

officer. The modification will contain a provision that the contractor must obtain the approval of the contracting officer before exceeding the lower ceiling.

E. Major Subordinate Commands (MSC's)

The MSC's have implemented the ASPR, APP, and AMCPI with command procurement instructions, circulars, internal regulations and Standing Operating Procedures (SOP's). Generally, the instructions and circulars reiterate and expand upon the policy and reporting requirements expressed in the ASPR, APP and AMCPI. For example, the instructions which were reviewed outline the internal controls required for undefinitized change orders and reemphasize the importance of forward pricing or ceiling prices. The regulations and SOP's establish the command procedures for contractual implementation or ECP's. Normally, the regulations covered the subject in more detail than the SOP's.

F. Configuration Management

Configuration Management (CM) is defined in AR 70-37 as, "A discipline applying technical and administrative direction and surveillance to (1) identify and document the functional and physical characteristics of a configuration item, (2) control changes (emphasis added) to those characteristics, and (3) record and report change processing and implementation status."

The definition makes two points pertinent to this report. First, change control is an integral part of configuration management. Secondly, the CM discipline is technical and administrative.

The purpose of this study was to investigate change order administration from a procurement management viewpoint. An in-depth look at the technical aspects of configuration management was considered to be beyond the scope of this investigation. Rather, configuration management and policy was examined in order to determine its relationship to and impact upon procurement change order administration. The lowest common denominator for the two functions is the ECP. As a rule, the CM program generates the ECP and the contracting officer implements it contractually.

The configuration manager functions as the manager of an ECP. A proposed engineering change is evaluated as to need, adequacy, cost effectiveness, total system impact, alternatives to the change and variety of other factors. The evaluations are usually conducted by teams of technical personnel assigned to research, development and engineering organizations or to project management staffs. The teams may also include individuals from quality assurance, procurement and other interested functions.

MIL-STD-480, "Configuration Control-Engineering Changes, Deviations and Waivers," is the key change control document in CM. It is the standard which covers the preferred method for processing an ECP.

As mentioned in paragraph E above, change order regulations and policies at the commodity commands cover the contractual implementation of ECP's. The procedures require CM approval of a proposed engineering change prior to the issuance of a contract modification. For example, one command states that no change order shall be issued for an engineering change unless

it has been approved by: (1) the configuration manager for changes estimated to cost less than \$50,000; (2) the Division Chief or Chief of the Laboratory for changes between \$50,000 and \$150,000; and (3) the Senior Configuration Control Board for changes above \$150,000.

G. Analysis

A review of change order policy documents at representative commands shows that the documents are consistent with the requirements of the ASPR, APP, and AMCPI. The documents emphasize the preference for negotiated supplemental agreements prior to implementation of engineering changes. In the event unilateral change orders become necessary, commodity command policy statements clearly express the need to include negotiated ceiling or not-to-exceed prices on the SF 30 issued to the contractor.

Policy and procedures on change order administration appear to be more adequately covered when published in command regulations. SOP's are of short duration and are not as widely disseminated as regulations. Also, SOP's do not usually cover a subject in as much depth as regulations.

An investigation of contract files confirmed that contracting officers are knowledgeable about change order policy and procedures. They are also adhering to policy. In one instance, a contracting officer rejected a project office request for implementation of a change order. The letter of rejection included an explicit statement of the clearances necessary to justify issuance of a formal change order.

Contract modifications were well-documented in the files reviewed. In

every case, a change order included a bilateral ceiling price. There was no evidence that these ceiling prices were seriously inflated. The danger, of course, in unrealistically high ceiling prices is that unnecessary funds are obligated that are difficult to deobligate and use elsewhere until the change is definitized. Field pricing support was obtained for high dollar value change orders. The files reflected numerous letters to contractors requesting submission of contractor proposals, indicating contracting personnel were conscious of definitization schedules.

Configuration management concurrences were noted on the correspondence pertaining to ECP's. Nevertheless, the age old problem of inadequate technical data continues to persist. In two instances, the technical data package (TDP) used as the basis for a second source procurement was incomplete. Design freezes were necessary to permit placement of the contracts. After award, ECP's were necessary to correct the TDP deficiencies. Fortunately, the second source contractors performed in good faith. They cooperated with the Government in revising the TDP and agreed to reasonable equitable adjustments. Other contractors with financial problems may have used the deficient TDP to their economic advantage.

In summary, change order policy is consistent throughout the commodity commands. Contracting personnel apparently understand and are implementing DOD and Army policy. Personnel who were interviewed agreed that change orders are much better controlled than in past years. In fact, they did not feel change orders were currently a major problem. On the other hand, some cited minor problems. Most of the complaints pertained to the accounting

and appropriations requirements of Section XX of the ASPR. Executing modifications on contracts involving multiple customers creates burdensome paper work requirements. The final complaint was that some project engineers are prone to use the change order as the rule rather than the exception. This allegation is not new, yet it is probably valid. Improvement in this area is primarily the responsibility of configuration or project management.

CHAPTER IV

CHANGE ORDER REPORTS

A. General

Change order policy in the APP and AMCPI (Chapter IV) includes the requirement for reporting undefinitized change orders to higher levels within the Army. Annually, the Army results are forwarded to DOD. The undefinitized change orders which are reported are those valued at \$10,000 or over. In this section a sample of charts are presented which show representative change order results within DOD and AMC. The section concludes with a discussion of internal change order reporting at the commodity commands and observations on the current reporting systems.

B. DOD

Undefinitized change orders are reported in the Year End Report of the results of the Logistics Performance Measurement and Evaluation System (LPMES). The change order report is one of the seven procurement areas which is analyzed in LPMES. LPMES is one of the major areas of interest in the DOD Management by Objectives package. DOD and Army change order results for fiscal years 72, 73 and 74 are shown in figures 1 and 2. Figure 1 gives the value of change orders which had not been definitized at the end of each of the fiscal year. Figure 2 gives the value of undefinitized change orders which were overage (six months or older) at the end of the period.

VALUE OF UNDEFINITE CHANGE ORDERS ON HAND (OUTSTANDING)
DOD AND ARMY (IN MILLIONS OF DOLLARS)

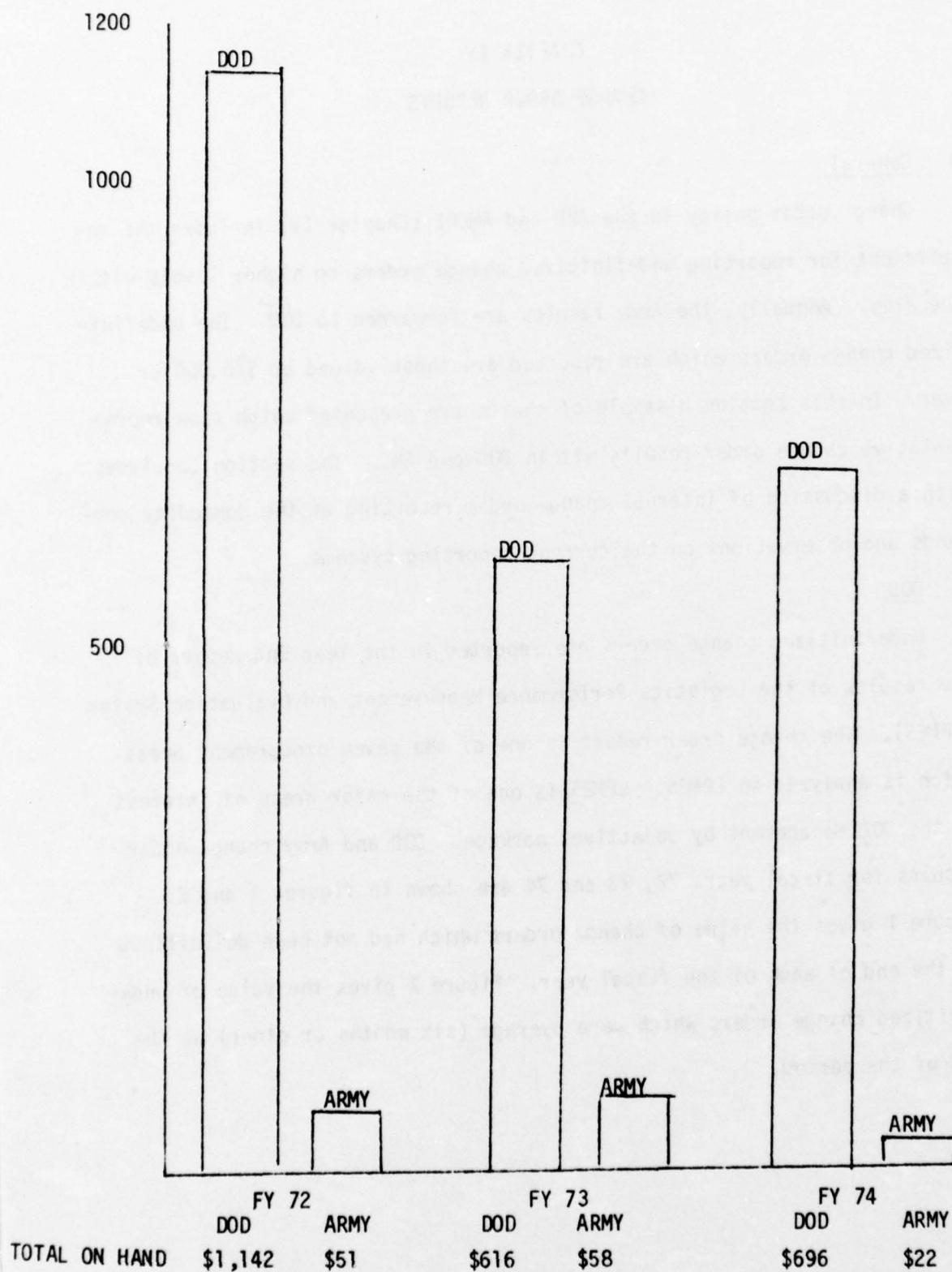


FIGURE 1

VALUE OF UNDEFINITIZED CHANGE ORDERS ON HAND (OVERAGE),
DOD AND ARMY (IN MILLIONS OF DOLLARS)

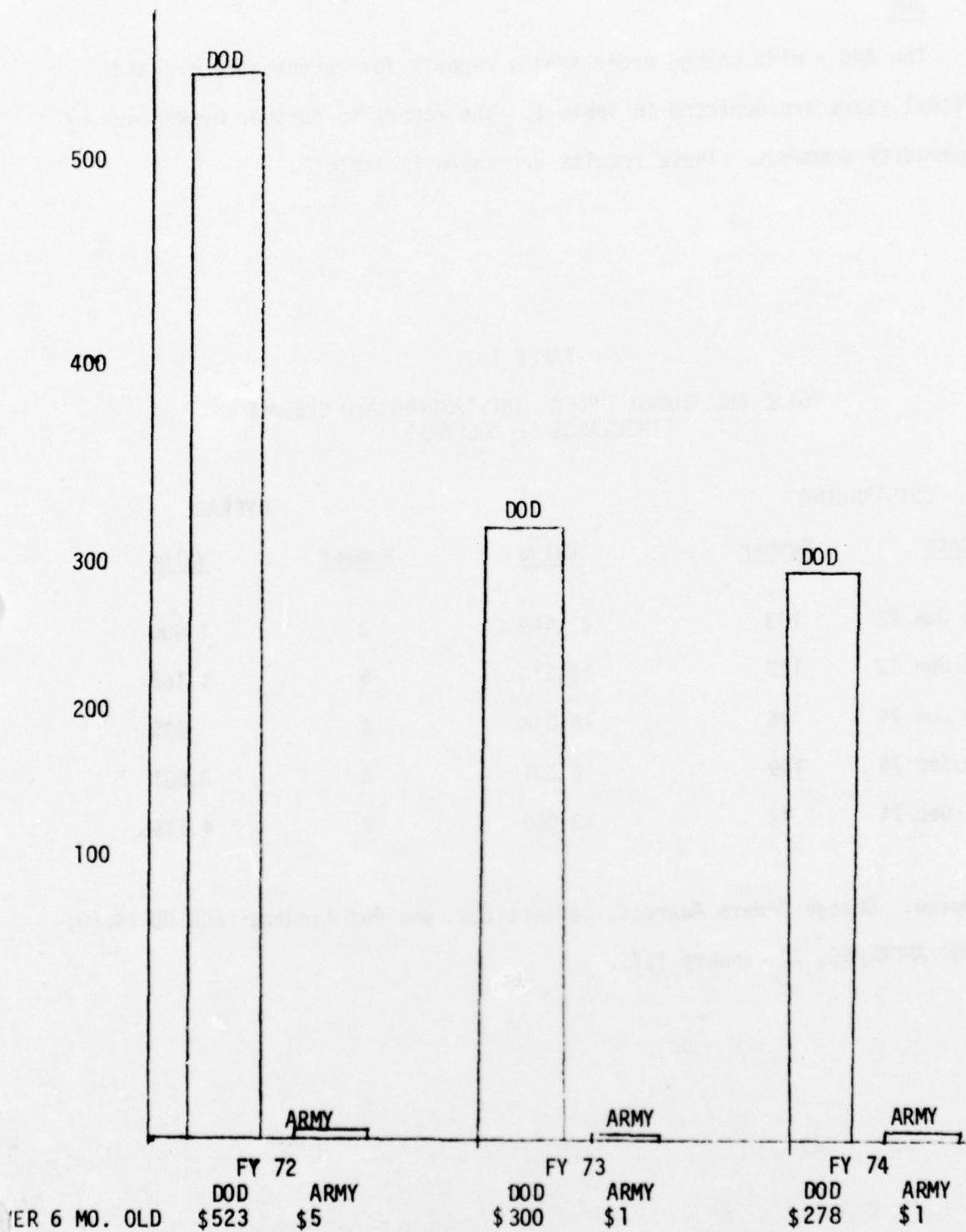


FIGURE 2

C. AMC

The AMC - wide change order status reports for recent quarters and fiscal years are depicted in Table 1. The report is further broken out by commodity commands. These results are shown in Table 2.

TABLE 1
TOTAL AMC CHANGE ORDERS OUTSTANDING AND OVERAGE
(THOUSANDS OF DOLLARS)

OUTSTANDING			OVERAGE	
<u>Date</u>	<u>Number</u>	<u>Value</u>	<u>Number</u>	<u>Value</u>
30 Jun 72	133	22,449	2	1,900
30 Jun 73	113	28,512	6	1,160
30 Jun 74	96	15,046	2	475
30 Sep 74	109	16,501	8	3,601
31 Dec 74	92	13,060	12	4,115

Source: Change Orders Awarded, Definitized, and Outstanding (RCS DD-14L(Q)-680) AMCRP-SO, 27 January 1975.

TABLE 2
AMC CHANGE ORDERS OUTSTANDING AND OVERAGE BY COMMAND (IN MILLIONS OF DOLLARS)

COMMAND	30 Jun 72			30 Jun 73			30 Jun 74			30 Sep 74			31 Dec 74		
	OUTSTANDING NO	VALUE	OVERAGE	OUTSTANDING NO	VALUE	OVERAGE	OUTSTANDING NO	VALUE	OVERAGE	OUTSTANDING NO	VALUE	OVERAGE	OUTSTANDING NO	VALUE	OVERAGE
A	78	6.66	0 .00	68	6.97	1 .46	32	5.08	1 .02	47	3.62	2 .35	41	2.99	3 .29
B	12	4.27	0 .00	8	1.90	1 .49	46	5.23	0 .00	40	6.17	0 .00	27	2.62	0 .00
C	21	6.47	0 .00	27	19.04	0 .00	10	2.60	0 .00	14	3.76	4 1.94	11	2.46	6 1.46
D	0	.00	0 .00	2	24	1 .03	4	1.74	1 .46	3	2.36	2 1.22	7	4.73	3 2.36
E	20	5.03	2 1.90	8	.37	2 .18	3	.10	0 .00	2	.08	0 .00	5	.26	0 .00
F	1	.01	0 .00	0	.00	0 .00	1	.30	0 .00	1	.30	0 .00	0	.00	0 .00
G	0	.00	0 .00	0	.00	0 .00	0	.00	0 .00	0	.00	0 .00	0	.00	0 .00
H										2	.21	0 .00	1	.01	0 .00
TOTAL	132	22.45	2 1.90	113	28.51	5 1.16	96	15.05	2 .48	109	16.50	8 3.60	92	13.06	12 4.12

Source: Change Orders Awarded, Definitized, and Outstanding (RCS DD-14L(Q)-680) AMCRP-50,
27 January 1975.

D. MSC's

Commodity command reporting is geared to the reporting requirements of the APP and AMCPI. As required by the AMCPI, the commands have developed procedures for tracking undefinitized change orders. The systems vary in sophistication. One command which has a relatively low incidence of change order issuance keeps manual records. On the other hand, a command which issues large numbers of change orders keeps abreast of change order status by means of computer printouts, supplemented by charts. The tracking system for this command is as follows:

1. Weekly and monthly printouts of change order status (regardless of dollar value).
2. Day-to-day monitoring by Contracting Officer/Section Chief.
3. Weekly meetings between Section Chief and Branch Chief with input to the Procurement Division, Operations and Control Branch.
4. Monthly review by Chief, Procurement and Production Directorate.

E. Observations

1. The DOD analysis of figures 1 and 2 indicates that the department is pleased with the efforts of the DOD components to control undefinitized change orders. The analysis points out that "improvement objectives have been realized with outstanding results."¹ The significant drop in on hand change orders from \$1,142 million in FY 72 to \$616 million in FY 73 and \$696 million in FY 74 is noteworthy. This was the conclusion of the analyst

¹Office of the Assistant Secretary of Defense (Installations and Logistics), Logistics Performance Measurement and Evaluation System, Year End Report FY 74, p. B.2.1.

despite the fact that the DOD exceeded its \$680 million goal in FY 74 by \$16 million. The control of overage change orders followed a similar pattern. Again, the goal of \$187 million for FY 74 was exceeded, by some \$91 million. But the analyst conceded that the goal was extremely tight. Although the Navy was responsible for the goal not being met, their 4th quarter results showed a significant improvement. It was further pointed out that overage change orders were at the lowest level since the reporting requirement was initiated.

2. The Army FY 74 results are more impressive than the overall DOD figures. Actual totals for the year reflected an on hand value of \$22 million compared with a goal of \$45 million. The overage value was \$1 million.

3. The AMC change order picture is generally consistent with DOD and Army results. The 30 Jun 74 report in both the outstanding and overage categories was impressive. At first blush it might appear that the Sep 74 and Dec 74 results relative to overage change orders bear close watching. It looks as though a disturbing trend could be developing. But historical data indicates that the first two quarters are apt to be higher than the last. At the end of the first quarter of FY 1974, overage change orders in AMC were valued at more than \$5 million. Yet the final FY 1974 value was approximately \$1 million. This apparently means that activities concentrate on definitizing overage change orders during the last half of the fiscal year.

4. Unquestionably, the Army change order statistics lead us to the conclusion that change orders of \$10,000 and over are under control. But there is another side. A number of those interviewed expressed the view that there is currently too much emphasis on change order definitization. While admitting that change orders were loosely managed prior to the requirement for the present reporting system, they think that today the pendulum has swung too far in the direction of tight management. Now that change orders are under control it was felt that the reins can be loosened. Those critical of the current program pointed out two potentially adverse results of overmanagement. One is that the equitable adjustment associated with the definitized change order might favor the contractor. The government negotiator does not want to be identified with an overage change order. In his anxiety to reach a settlement, he may make expedient concessions which are not in the best interests of the Government. Conversely, the contractor may deliberately drag his feet in an attempt to outwit the Government. The Changes clause states that a claim must be submitted within 30 days of the issuance of a change. But the effect of the contractual language can be diluted in three ways. First, to comply with the 30-day requirement the contractor need only assert formally his intent to submit a claim. The amount may be submitted at any time prior to final payment. Secondly, the clause provides for contracting officer acceptance of a claim after the 30-day period if he decides that the facts justify such action. Thirdly,

the courts have ruled that a contractor's claim will not be barred if filed after the 30-day period unless the Government can show that it has been prejudiced by the untimely claim.¹ Finally, even if the contractor submits his proposal within 30 days, he may deliberately use stalling tactics as a negotiation strategy. Strict management of changes can also lead to neglect of new procurements. The same procurement personnel are normally responsible for initiating both contract modifications and new procurement. Concentration of effort on modifications can mean less emphasis on new buys. There is no proof that the current emphasis on change control has created the conditions which have been described. Obviously, the charges would be hard to prove. But it should be remembered that the potential shortcomings were suggested by operating procurement personnel.

¹E. W. Bloss Co., ASBCA 9584, 65-1 BCA 4610.

CHAPTER V

CONSTRUCTIVE CHANGE ORDERS

A. Importance

In the last 10 years the doctrine of the constructive change has expanded steadily. New types of constructive change orders (See Chapter I, par D 5) have been created by contract disputes and subsequent legal decisions.¹ Contractors have become more knowledgeable of the practice and potential of this unique doctrine.

Logically, it can be assumed that in times of depressed business conditions the constructive change becomes an even greater threat to Government contract management. Contractors are actively seeking ways to improve their financial positions. The constructive change offers such an opportunity.

B. Relation to the Changes Clause

Any discussion of the constructive change points out that a constructive change will be treated contractually as a change order within the purview of the Changes clause. Of the 302 Changes cases decided by ASBCA in FY 74, the majority dealt with constructive changes. Hence it can readily be seen that a project dealing with change order administration and litigation must address constructive change problems.

¹F. Trowbridge vom Baur. "Constructive Change Orders/Edition II, Briefing Papers, The Government Contractor, No. 735. 1973.

C. Constructive Change Features

The CCO must include a change in the work established by the contract. It requires an affirmative act or a failure to act by the Government which can be interpreted as an order of an authorized Government representative.² Thus, CCO's are created by actions or inactions of authorized Government officials which can be interpreted as requiring the contractor to perform work not in the original contract.

The CCO may be oral or written. It may be created by a verbal order, letter, telegram, TWX or a variety of other means of communication. Recognition and identification of a CCO is not always easy. Government officials are more often than not surprised when they receive constructive change claims from contractors.

D. Types of CCO's

1. General. There are many types of CCO's and the list grows annually. No attempt is made here to describe all the conditions which can lead to CCO's. Rather, only the most common types are discussed.

2. Interpretation of specifications. The most prevalent CCO is caused by the ambiguous specification.³ A rule of contract law states:

"Where words or other manifestations of intention bear more than one reasonable meaning an interpretation is preferred which operates more strongly against the party from whom they proceed, unless their use by him is prescribed by law."⁴

²Ibid.

³A Course in Changes and Modifications. Procurement Associates, Inc., 1973, p. III-3.

⁴American Law Institute. Restatement of the Law of Contracts, para 236(d).

This statement means that Government specifications which reasonable men can interpret in more than one way will be interpreted against the Government.⁵ If the Government enforces its interpretation, a constructive change is created.⁶

3. Defective specifications. It is the design specification which is susceptible to being defective. A design specification describes how an item is to be made. There is ordinarily an implied warranty by the Government that if the contractor follows the design specifications a satisfactory product will result.⁷ Defective design specifications are erroneous, illegible or contain internal conflicts.⁸ If such defects result in increased costs to the contractor, he is entitled to compensation under the constructive change doctrine.⁹

4. Impossibility of performance.. An impossible specification is one which a contractor cannot meet because the specification requirements are unattainable.¹⁰ Impossibility takes two forms, actual impossibility and practical impossibility. Actual impossibility occurs when the contract cannot be performed by the contractor or anyone else. Practical impossibility, or commercial impracticability, means that the contract requirements are

⁵John J. Jennings, General Services Board of Contract Appeals Case No. 3795, 74-1 BCA para. 10559.

⁶Hallicrafters Co., Armed Services Board of Contract Appeals Case No. 11450, 68-2 BCA para. 7274.

⁷*Spearin vs United States*, U.S. 132(1918) and *REDM vs United States* (1966).

⁸A Course in Changes and Modifications Procurement Associates, Inc., 1973, p. III-15.

⁹J. W. Hurst and Son Awings, ASBCA 4167, 50-1 BCA 2095.

¹⁰Vom Baur, p. 6.

impracticable because of extreme and unreasonable difficulty, expense, injury and loss involved.¹¹ The most common type of impossibility occurs when the contract includes design and performance requirements which are incompatible. In such cases the contractor is entitled to an equitable adjustment for the additional costs incurred as a result of the impossibility.¹²

5. Acceleration. Acceleration occurs when the Government requires the contractor to speed up contract performance beyond what the contract requires.¹³ It usually happens when the Government representative adds work but fails to extend the delivery date.¹⁴ This situation normally constitutes an excusable delay which entitles a contractor to an extension of time. Failure of the Government to grant the extension sets the stage for constructive acceleration. The contractor may have to take actions to meet the delivery date which increase his costs, e.g., overtime. If his delay is excusable and no extension is granted, then he may be entitled to an equitable adjustment for increased costs.

6. Inspection. Actions of inspectors and other Government personnel requiring work beyond original contract requirements may be CCO's.¹⁵ These include (1) orders to perform excessive or repetitive tests,¹⁶ (2) changing the time and manner of inspection or tests,¹⁷ (3) requiring the contractor

¹¹A Course in Changes and Modifications, p. III-21.

¹²Ibid.

¹³vom Baur, p. 5.

¹⁴A Course in Changes and Modifications, p. III-27.

¹⁵vom Baur, p. 8.

¹⁶Szemco Inc., ASBCA 9892, 65-1 BCA para. 4535.

¹⁷Gordon H. Ball, Inc., ASBCA 8316, 63 BCA para. 3925.

to meet a higher standard of performance,¹⁸ or (4) overstrict inspection.¹⁹ (The latter two cases may also be classified as CCO's which involve interpretation of specifications; but since they relate directly to inspection, they are included here.) Two points need to be made regarding CCO's related to inspection. One is that the Government inspector must have authority to order contract changes or the contractor has to prove that the contracting officer acquiesced in the decision of the inspector in order for a CCO to exist. Secondly, a change in inspection does not necessarily constitute a change in requirements entitling a contractor to an equitable adjustment.²⁰

7. Others. The above types of CCO's are the most prevalent. However, as was suggested earlier, there has been an escalation in CCO's. Many other actions by the Government may result in CCO's. Examples of these are delays in furnishing government furnished property (GFP),²¹ geographical changes in the place of performance,²² changes in estimated quantities,²³ increases of changes in the labor force,²⁴ preparation of cost estimates,²⁵ deceleration,²⁶ and abuse of discretion.²⁷

¹⁸Williams & Dunlap, ASBCA 6145, 1963 BCA para. 3834.

¹⁹Stanley W. Wasko, ASBCA 12288, 68-1 BCA para. 6986.

²⁰A Course in Changes and Modifications, p. III-40.

²¹Aircraft Armaments, Inc., ASBCA 1049, 1963 BCA para. 3934.

²²Contractor Equipment Rental Co., ASBCA 13052, 70-1 BCA para. 8183.

²³Aerodex, Inc., ASBCA 6546, 61-2 BCA para. 3113.

²⁴International Aircraft Services Co., ASBCA 8389, 65-1 BCA para. 4793.

²⁵Fisherman Boat Shop, Inc., ASBCA 15159, 72-1 BCA para. 9416.

²⁶Joseph Bell v. U.S., 186 ct. cl. 189, 404 F. 2d 975(1968), 10 G. C., para. 513-

²⁷Mecon Co., ASBCA 13620, 11 G. C., para. 448, 69-2 BCA para. 7786.

E. Notification of Changes

1. General. Section XXVI, Part 8 of the ASPR is entitled "Notification of Changes." It is specifically written to cope with the problem of the CCO. Naturally, the regulation cautions against actions which may result in a CCO. However, if a condition occurs which might lead to a CCO, the ASPR provides for prompt reporting of that condition. Early recognition enables the Government to evaluate the alleged change and (i) confirm that the Government conduct is a change, or (ii) countermand the alleged change, or (iii) notify the contractor that the Government does not agree that there is a change.

2. Authorized Representative. See the definition in Chapter I, D 10. The CCO definition recognizes that a CCO may be created by actions of a Government representative, other than the contracting officer, who the contractor deems authorized to execute contract changes.²⁸ Part 8 covers procedures by which a contracting officer may designate a "specifically authorized representative" in accordance with the clause in ASPR 7-104.86 (Appendix B). The authorized representative may issue directions and interpretations during contract performance. The designation by the contracting officer shall be in writing and shall prescribe the scope and duration of the authority of the "specifically authorized representative." This procedure clearly establishes who speaks for the Government.

3. ASPR 7-1048, "Notification of Changes" Clause. This clause puts the contractor on notice that he must promptly report any conduct which he considers a constructive change order. It is intended to be used in negotiated contracts of more than \$1,000,000 which are susceptible to constructive changes.

²⁸ Lox Equipment Co., ASBCA 8985, 64 BCA 4463.

F. Analysis

1. ASBCA Decisions. A review of ASBCA decisions revealed that almost a third of the appeals cited the changes clause as the primary clause involved in the dispute. Of these appeals, at least 75% involved constructive change orders. Fortunately, most of the decisions were favorable to the Government. But the message is clear. Contractors are becoming increasingly knowledgeable to the practice. It is apparent that Government acquisition personnel must keep pace. Avoidance of constructive change conditions should be a primary Government goal.

2. Contract Files. No evidence was found in contract files of the use of the Notification of Changes clause or the designation of a "specifically authorized representative." But this was to be expected since the part which covers Notification of Changes is a recent addition to the ASPR.²⁹ Further, there was no evidence of specific constructive change problems. Of course, identifying constructive change conduct in contract files is a difficult assignment. If both parties agree that an action is a CCO, a supplemental agreement will undoubtedly be negotiated. The modification will not show that the action is a formalization of a CCO. A dispute between the contractor and Government regarding a CCO will be decided by the ABSCA.

²⁹The Notification of Changes clause has been noted in recent contracts reviewed by the Procurement Research Office.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

Most of the conclusions of this study were discussed at the end of appropriate chapters. For convenience they will be summarized here.

The equitable adjustment negotiated on the definitized change order has not been the basis for contract disputes appealed to ASBCA and the Court of Claims. Apparently, Army emphasis on ceiling prices and timely definitization of change orders has paid dividends.

In this regard DOD and Army policy on formal change orders appears adequate. Admittedly, the policy is not extensive and is, to a degree, fragmented. Yet it is consistent and well-understood throughout AMC.

Only a small number of change orders are overage in the Army. Generally, even on these there is a valid explanation for the overage condition. In one case, the negotiations were deliberately delayed, pending an ASBCA ruling which could affect the change order negotiations. In at least two cases, the contractors were late in submitting their proposals.

The constructive change order is not a major problem for the Army. However, most contractor appeals under the Changes clause cite the CCO as the central issue. Additionally, the constructive change becomes more pervasive each year. Potentially, it is a serious threat to successful performance on Army Contracts.

B. Recommendations

The recommendations of this report fall into two categories. The first are those which are directly related to the objectives of this study. The second category includes ideas of a general nature which are relevant to the field of change order administration.

I. Specific recommendations:

a. Continue to emphasize forward pricing or bilateral ceiling prices on contract modifications. The program has obviously been successful. Each command now has control over change orders. This was not the case a few years ago.

b. Consider some relaxation in the reporting requirements on change order definitization. While detailed and frequent reports were necessary initially to bring order to the management of changes, it now appears that monthly and quarterly reports are unnecessary. Certainly, the commands will need to continue their monitorship of change order definitization. But reports can be limited to exception or problem cases. It is recognized that implementation of this recommendation will require concurrence by DOD and DA. A review of Army results suggests that the relaxation can be justified. Concomitant with this recommendation, provide a tolerance for overage change orders. While all agree that overage change orders are normally undesirable, it is occasionally good business practice not to rush the negotiation of equitable adjustments. The current reporting system implies that an overage change order is, per se, bad.

C. Take steps to counter the threat of the constructive change order.

(1) Expand the usage of the Notification of Changes clause or develop other "early warning" phraseology for incorporation in contracts. In this sense, "early warning" means a contractual requirement for contractors to report immediately any condition which he believes constitutes a constructive change order.

(2) Implement immediately the Commission on Government Procurement Recommendation G-1 which reads:

"Make clear to the contractor the identity and authority of the contracting officer, and other designated officials, to act in connection with each contract."¹

The executive branch has stated that the recommendation will be implemented through a Government-wide issuance² but until this issuance is circulated, require statements in the contract which stipulate the Government personnel who are authorized to make contract changes.

(3) Include more educational information on constructive change orders in command regulations and policy documents. Make certain that all command personnel involved in contracts know the definition and impact of constructive change orders. Programs on Government contract changes are being offered on a regular basis to Government contractors. The programs of instruction of two of the courses which are conducted put heavy emphasis on CCO's. It is imperative that Government contracting personnel are as knowledgeable as their industry counterparts.

¹Report of the Commission on Government Procurement. VOLUME 4, p. 12. 1972.

²Commission on Government Procurement Recommendations. Executive Branch Position. Federal Contract Reports. Number 563, January 13, 1975.

2. General recommendations:

a. Investigate the desirability of using a clause in contracts which provides for a "no cost" change when the cost of the change is beneath a certain dollar ceiling. From time to time this technique is currently used on AMC contracts. Expansion of its usage appears to be a feasible way to reduce the administrative time of implementing and definitizing change orders.

b. Consider "batch" pricing techniques on contracts where a large volume of changes is anticipated. Rather than price each change order separately, use statistical techniques which allow pricing of a sample of change orders.³ The prices of the remainder of the change orders in the lot are determined by the sample results. No heavy backlog of unpriced change orders was noticed in the contract files reviewed in this study. Nevertheless, the statistical method has been successfully used by other DOD agencies and appears to be a valuable management tool.

c. Investigate the feasibility of adding "teeth" to the provision in the Changes clause (See Appendix A) which states that the contractor has 30 days in which to state his claim. In spite of the contractual language, contractors have generally been allowed to submit claims at anytime prior to final payment (Chapter V). There may be no way to overcome this serious hindrance to timely definitization. Yet it appears a fruitful area for legal or ASPR Committee consideration.

³A method that has been developed and used is entitled On Statistical Methods in Contract Negotiation, Parts I, II and III. K. T. Wallenius, Clemson University, 1973. Navy Contract No. 0014-71-A-0339-0002.

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APPENDIX A
CHANGES CLAUSE FOR FIXED PRICE SUPPLY CONTRACTS

ASPR 7-103.2 CHANGES (1958 JAN)

The Contracting Officer may at any time, by a written order, and without notice to the sureties, make changes, within the general scope of this contract, in any one or more of the following: (i) Drawings, designs, or specifications, where the supplies to be furnished are to be specially manufactured for the Government in accordance therewith; (ii) method of shipment or packing; and (iii) place of delivery. If any such change causes an increase or decrease in the cost of, or the time required for the performance of any part of the work under this contract, whether changed or not changed by any such order, an equitable adjustment shall be made in the contract price or delivery schedule, or both, and the contract shall be modified in writing accordingly. Any claim by the Contractor for adjustment under this clause must be asserted within 30 days from the date of receipt by the Contractor of the notification of change, provided, however, that the Contracting Officer, if he decides that the facts justify such action, may receive and act upon any such claim asserted at any time prior to final payment under this contract. Where the cost of property made obsolete or excess as result of a change is included in the Contractor's claim for adjustment, the Contracting Officer shall have the right to prescribe the manner of disposition of such property. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes". However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

APPENDIX B

NOTIFICATION OF CHANGES SAMPLE CLAUSE

ASPR 7-104.86 NOTIFICATION OF CHANGES

(a) Definitions. As used in this clause, (i) the term "Contracting Officer" does not include any representative of the Contracting Officer whether or not such representative is acting within the scope of his authority, and (ii) the term "specifically authorized representative" means any person the Contracting Officer has so designated by written notice which shall refer to this subparagraph and shall be issued to the designated representative prior to his invocation of such authority (and a copy of which shall be provided to the Contractor).

(b) Notice. The primary purpose of this clause is to obtain prompt reporting of Government conduct which the Contractor considers to constitute a change to this contract. Except for changes identified as such in writing and signed by the Contracting Officer, the Contractor shall notify the Administrative Contracting Officer in writing promptly, and in any event within* (*to be negotiated) calendar days from the date that the Contractor identifies any Government conduct (including actions, inactions, and written or oral communications) which the Contractor regards as a change to the contract terms and conditions. The Notice shall state, on the basis of the most accurate information available to the Contractor:

- (i) the date, nature, and circumstances of the conduct regarded as a change;
- (ii) the name, function, and activity of each Government individual and contractor official or employee involved in or knowledgeable about such conduct;

- (iii) the identification of any documents and the substance of any oral communication involved in such conduct;
- (iv) in the instance of alleged acceleration of scheduled performance or delivery, the basis upon which it arose;
- (v) the particular elements of contract performance for which the Contractor may seek an equitable adjustment under this clause, including:
 - (1) what contract line item(s) have been or may be affected by the alleged change;
 - (2) what labor or materials or both have been or may be added, deleted, or wasted by the alleged change;
 - (3) to the extent practicable, what delay and disruption in the manner and sequence of performance and effect on continued performance have been or may be caused by the alleged change;
 - (4) what adjustments to contract price, delivery schedule, and other provisions affected by the alleged change are estimated;and
- (vi) the Contractor's estimate of the time by which the Government must respond to the Contractor's notice to minimize cost, delay or disruption of performance.

(c) Continued Performance. Following submission of the notice required by (b) above, the Contractor shall diligently continue performance of this

contract to the maximum extent possible in accordance with its terms and conditions as construed by the Contractor, unless such notice reports a direction of the Contracting Officer or a communication from a specifically authorized representative of the Contracting Officer, in either of which events the Contractor shall continue performance in compliance therewith, provided, however, that if the Contractor regards the direction or communication as a change as described in (b) above, notice shall be given as therein provided. All directions, communications, interpretations, orders and similar actions of such specifically authorized representative shall be reduced to writing promptly and copies thereof furnished to the Contractor and to the Contracting Officer. The Contracting Officer shall promptly countermand any action which exceeds the authority of the specifically authorized representative.

(d) Government Response. The Contracting Officer shall promptly, and in any event within* (**to be negotiated) calendar days after receipt of NOTICE, respond thereto in writing. In such response the Contracting Officer shall either:

- (i) confirm that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance,
 - (ii) countermand any communication regarded as a change,
 - (iii) deny that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance;
- or

(iv) in the event the Contractor's notice information is inadequate to make a decision under (i), (ii), or (iii) above, advise the Contractor what additional information is required, and establish the date by which it should be furnished and the date thereafter by which the Government will respond.

(e) Equitable Adjustments. If the Contracting Officer confirms that Government conduct effected a change as alleged by the Contractor, and such conduct causes an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether changed or not changed by such conduct, an equitable adjustment shall be made:

(i) in the contract price or delivery schedule or both; and

(ii) in such other provisions of the contract as may be affected; and the contract shall be modified in writing accordingly. In the case of drawings, designs or specifications which are defective and for which the Government is responsible, the equitable adjustment shall include the cost and time extension for delay reasonably incurred by the Contractor in attempting to comply with such defective drawings, designs or specifications before the Contractor identified, or reasonably should have identified, such defect. When the cost of property made obsolete or excess as a result of a change confirmed by the Contracting Officer pursuant to this clause is included in the equitable adjustment, the Contracting Officer shall have the right to prescribe the manner of disposition of such property. The equitable adjustment shall not include increased costs or time extensions

for delay resulting from the Contractor's failure to provide notice to continue performance as provided, respectively, in (b) and (c) above.

NOTE: The phrases "contract price" and "cost" wherever they appear in the foregoing clause, may be appropriately modified to apply to cost-reimbursement or incentive type contracts, or to combinations thereof.

APPENDIX C

ECP AND CHANGE ORDER ACCOUNTING SAMPLE CLAUSES

ASPR 7-104.89 ENGINEERING CHANGE PROPOSALS

(a) The Contracting Officer may at any time, in writing, request the Contractor to prepare and submit an Engineering Change Proposal (ECP) as that term is defined in MIL-STD-480, within the scope of this contract, as hereafter set forth. Upon receipt of such request, the Contractor shall submit to the Contracting Officer the information specified by, and in the format required by paragraph 4 of. MIL-STD-480.

(b) Any Contractor ECP shall set forth a "not to exceed" price* and delivery adjustment or a "not less than" price* and delivery adjustment, acceptable to the Contractor if the Government subsequently orders such ECP. If ordered, the equitable increase shall not exceed, nor shall the equitable decrease be less than, such "not to exceed" or "not less than" amounts.** This paragraph does not preclude any revision(s) or correction(s) of an ECP in accordance with paragraph 4.10 and 4.11 of MIL-STD-480. Concurrently with the submission of any ECP under this contract in which the proposed aggregate cost is \$100,000 or greater, the Contractor shall submit to the Contracting Officer a completed DD Form 633-5. At the time of agreement upon the price of the ECP, the Contractor shall submit a signed Certificate of Current Cost or Pricing Data.

ASPR 7-104.90 CHANGE ORDER ACCOUNTING

When the Contracting Officer estimates that the cost of a change or series of related changes will exceed \$100,000, he may require change order

accounting. The Contractor, for each such change or series of related changes, shall maintain separate accounts by job order or other suitable accounting procedure, of all incurred segregable, direct costs (less allocable credits), of work, both changed and not changed, allocable to the change. Such accounts shall be maintained until the parties agree to an equitable adjustment for the change order.

APPENDIX D

STUDY TEAM COMPOSITION

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